West Virginia Department of Environmental Protection Division of Air Quality

Earl Ray Tomblin Governor Randy C. Huffman Cabinet Secretary

Permit to Operate



Pursuant to **Title V**of the Clean Air Act

Issued to:

Dominion Transmission, Inc. Kennedy Compressor Station R30-04100011-2011

> John A. Benedict Director

Permit Number: **R30-04100011-2011**Permittee: **Dominion Transmission, Inc**Facility Name: **Kennedy Compressor Station**Mailing Address: 445 West Main Street

Clarksburg, WV 26301

This permit is issued in accordance with the West Virginia Air Pollution Control Act (West Virginia Code §§ 22-5-1 et seq.) and 45CSR30 — Requirements for Operating Permits. The permittee identified at the above-referenced facility is authorized to operate the stationary sources of air pollutants identified herein in accordance with all terms and conditions of this permit.

Facility Location: Valley Chapel, Lewis County, West Virginia
Mailing Address: Valley Chapel Road, Valley Chapel, WV 26446

Telephone Number: (304) 269-6417 Type of Business Entity: Corporation

Facility Description: Natural gas transmission facility

SIC Codes: 4922

UTM Coordinates: 543.59 km Easting • 4328.71 km Northing • Zone 17

Permit Writer: Beena Modi

Any person whose interest may be affected, including, but not necessarily limited to, the applicant and any person who participated in the public comment process, by a permit issued, modified or denied by the Secretary may appeal such action of the Secretary to the Air Quality Board pursuant to article one [§§ 22B-1-1 et seq.], Chapter 22B of the Code of West Virginia. West Virginia Code §22-5-14.

Issuance of this Title V Operating Permit does not supersede or invalidate any existing permits under 45CSR13, 14 or 19, although all applicable requirements from such permits governing the facility's operation and compliance have been incorporated into the Title V Operating Permit.

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1.0 Emission Units and Active R13, R14, and R19 Permits

1.1. Emission Units

Emission Unit ID	Emission Point ID	Emission Unit Description	Year Installed	Design Capacity	Control Device
EN03*	EN03	Reciprocating Engine/Integral Compressor; Caterpillar G3512TALE	2004	1100 HP	N/A
EN02*	EN02	Reciprocating Engine/Integral Compressor; White Superior 8GTLB	1983	1100 HP	N/A
TK01	TK01	Vertical Lube Oil Tank	1990	4,200 gallon	N/A
TK02	TK02	Vertical diesel tank	1990	2,730 gallon	N/A
TK03	TK03	Horizontal Ethylene Glycol Tank	1956	2100 gallon	N/A
TK04	TK04	Vertical Used Oil Tank	1991	3000 gallon	N/A
TK05	TK05	Horizontal Produced Fluids Tank	1956	2000 gallon	N/A
TK06	TK06	Vertical Wastewater Tank	1956	500 gallon	N/A
TK07	TK07	Horizontal Triethylene Glycol Tank	1956	1000 gallon	N/A
DEHY*	FI.	Dehydration unit still	1984	14 mmscf/day	Flare F1
RBR01*	RBR01	Dehydration unit reboiler	1984	1.0 MM BTU/hr	N/A
F1	FI.	Dehydration unit flare	1984	3.0 MM BTU/hr	N/A
DEHY02	DEHY02	Dehydration Unit	<u>2011</u>	23 mmscf/day	Flare F2
RBR02	RBR02	Reboiler Vent	<u>2011</u>	1.104 MMB TU/hr	===
<u>F2</u>	<u>F2</u>	Flare	<u>2011</u>	4.0 MMBTU/hr	

^{*} This equipment burns or combusts pipeline quality natural gas only.

1.2. Active R13, R14, and R19 Permits

The underlying authority for any conditions from R13, R14, and/or R19 permits contained in this operating permit is cited using the original permit number (e.g. R13-1234). The current applicable version of such permit(s) is listed below.

Permit Number	Date of Issuance
R13-2837 <u>A</u>	August 16, 2010-August 8, 2011

2.0 General Conditions

2.1. Definitions

- 2.1.1. All references to the "West Virginia Air Pollution Control Act" or the "Air Pollution Control Act" mean those provisions contained in W.Va. Code §§ 22-5-1 to 22-5-18.
- 2.1.2. The "Clean Air Act" means those provisions contained in 42 U.S.C. §§ 7401 to 7671q, and regulations promulgated thereunder.
- 2.1.3. "Secretary" means the Secretary of the Department of Environmental Protection or such other person to whom the Secretary has delegated authority or duties pursuant to W.Va. Code §§ 22-1-6 or 22-1-8 (45CSR§30-2.12.). The Director of the Division of Air Quality is the Secretary's designated representative for the purposes of this permit.
- 2.1.4. Unless otherwise specified in a permit condition or underlying rule or regulation, all references to a "rolling yearly total" shall mean the sum of the monthly data, values or parameters being measured, monitored, or recorded, at any given time for the previous twelve (12) consecutive calendar months.

2.2. Acronyms

CBI Confidential Business Information CEM Continuous Emission Monitor PM Particulate Matter CES Certified Emission Statement PM ₁₀ Particulate Matter less than C.F.R. or CFR Code of Federal Regulations 10µm in diameter CO Carbon Monoxide pph Pounds per Hour C.S.R. or CSR Codes of State Rules ppm Parts per Million DAQ Division of Air Quality PSD Prevention of Significant Deterioration Protection Protection Pounds per Square Inch FOIA Freedom of Information Act SIC Standard Industrial Classification HON Hazardous Air Pollutant Classification HON Hazardous Organic NESHAP SIP State Implementation Plan HP Horsepower SO ₂ Sulfur Dioxide lbs/hr or lb/hr Pounds per Hour TAP Toxic Air Pollutant LDAR Leak Detection and Repair TPY Tons per Year MACT Maximum Achievable Control TSP Total Suspended Particulate Technology USEPA United States Environmental Protection MmBtu/hr Million British Thermal Units per Hour UTM Universal Transverse Mmft³/hr or Million Cubic Feet Burned per Mercator Mercator Mercator Mercator Mercator Standards Not Applicable National Emissions Standards for Hazardous Air Pollutants	CAAA	Clean Air Act Amendments	NSPS	New Source Performance
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NO _x Nitrogen Oxides	NO_x	Nitrogen Oxides		

2.3. Permit Expiration and Renewal

- 2.3.1. Permit duration. This permit is issued for a fixed term of five (5) years and shall expire on the date specified on the cover of this permit, except as provided in 45CSR§30-6.3.b. and 45CSR§30-6.3.c. [45CSR§30-5.1.b.]
- 2.3.2. A permit renewal application is timely if it is submitted at least six (6) months prior to the date of permit expiration.

[45CSR§30-4.1.a.3.]

- 2.3.3. Permit expiration terminates the source's right to operate unless a timely and complete renewal application has been submitted consistent with 45CSR§30-6.2. and 45CSR§30-4.1.a.3. [45CSR§30-6.3.b.]
- 2.3.4. If the Secretary fails to take final action to deny or approve a timely and complete permit application before the end of the term of the previous permit, the permit shall not expire until the renewal permit has been issued or denied, and any permit shield granted for the permit shall continue in effect during that time.

 [45CSR§30-6.3.c.]

2.4. Permit Actions

2.4.1. This permit may be modified, revoked, reopened and reissued, or terminated for cause. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or of a notification of planned changes or anticipated noncompliance does not stay any permit condition.

[45CSR§30-5.1.f.3.]

2.5. Reopening for Cause

- 2.5.1. This permit shall be reopened and revised under any of the following circumstances:
 - a. Additional applicable requirements under the Clean Air Act or the Secretary's legislative rules become applicable to a major source with a remaining permit term of three (3) or more years. Such a reopening shall be completed not later than eighteen (18) months after promulgation of the applicable requirement. No such reopening is required if the effective date of the requirement is later than the date on which the permit is due to expire, unless the original permit or any of its terms and conditions has been extended pursuant to 45CSR§\$30-6.6.a.1.A. or B.
 - b. Additional requirements (including excess emissions requirements) become applicable to an affected source under Title IV of the Clean Air Act (Acid Deposition Control) or other legislative rules of the Secretary. Upon approval by U.S. EPA, excess emissions offset plans shall be incorporated into the permit.
 - c. The Secretary or U.S. EPA determines that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit.
 - d. The Secretary or U.S. EPA determines that the permit must be revised or revoked and reissued to assure compliance with the applicable requirements.

[45CSR§30-6.6.a.]

2.6. **Administrative Permit Amendments**

2.6.1. The permittee may request an administrative permit amendment as defined in and according to the procedures specified in 45CSR§30-6.4.

[45CSR§30-6.4.]

2.7. Minor Permit Modifications

2.7.1. The permittee may request a minor permit modification as defined in and according to the procedures specified in 45CSR§30-6.5.a.

[45CSR§30-6.5.a.]

2.8. **Significant Permit Modification**

The permittee may request a significant permit modification, in accordance with 45CSR§30-6.5.b., for 2.8.1. permit modifications that do not qualify for minor permit modifications or as administrative amendments. [45CSR§30-6.5.b.]

2.9. **Emissions Trading**

2.9.1. No permit revision shall be required, under any approved economic incentives, marketable permits, emissions trading, and other similar programs or processes for changes that are provided for in the permit and that are in accordance with all applicable requirements.

[45CSR§30-5.1.h.]

2.10. **Off-Permit Changes**

- 2.10.1. Except as provided below, a facility may make any change in its operations or emissions that is not addressed nor prohibited in its permit and which is not considered to be construction nor modification under any rule promulgated by the Secretary without obtaining an amendment or modification of its permit. Such changes shall be subject to the following requirements and restrictions:
 - The change must meet all applicable requirements and may not violate any existing permit term or condition.
 - b. The permittee must provide a written notice of the change to the Secretary and to U.S. EPA within two (2) business days following the date of the change. Such written notice shall describe each such change, including the date, any change in emissions, pollutants emitted, and any applicable requirement that would apply as a result of the change.
 - The change shall not qualify for the permit shield.
 - The permittee shall keep records describing all changes made at the source that result in emissions of regulated air pollutants, but not otherwise regulated under the permit, and the emissions resulting from those changes.
 - e. No permittee may make any change subject to any requirement under Title IV of the Clean Air Act (Acid Deposition Control) pursuant to the provisions of 45CSR§30-5.9.

f. No permittee may make any changes which would require preconstruction review under any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) pursuant to the provisions of 45CSR§30-5.9.

[45CSR§30-5.9.]

2.11. Operational Flexibility

2.11.1. The permittee may make changes within the facility as provided by § 502(b)(10) of the Clean Air Act. Such operational flexibility shall be provided in the permit in conformance with the permit application and applicable requirements. No such changes shall be a modification under any rule or any provision of Title I of the Clean Air Act (including 45CSR14 and 45CSR19) promulgated by the Secretary in accordance with Title I of the Clean Air Act and the change shall not result in a level of emissions exceeding the emissions allowable under the permit.

[45CSR§30-5.8]

2.11.2. Before making a change under 45CSR§30-5.8., the permittee shall provide advance written notice to the Secretary and to U.S. EPA, describing the change to be made, the date on which the change will occur, any changes in emissions, and any permit terms and conditions that are affected. The permittee shall thereafter maintain a copy of the notice with the permit, and the Secretary shall place a copy with the permit in the public file. The written notice shall be provided to the Secretary and U.S. EPA at least seven (7) days prior to the date that the change is to be made, except that this period may be shortened or eliminated as necessary for a change that must be implemented more quickly to address unanticipated conditions posing a significant health, safety, or environmental hazard. If less than seven (7) days notice is provided because of a need to respond more quickly to such unanticipated conditions, the permittee shall provide notice to the Secretary and U.S. EPA as soon as possible after learning of the need to make the change.

[45CSR§30-5.8.a.]

- 2.11.3. The permit shield shall not apply to changes made under 45CSR§30-5.8., except those provided for in 45CSR§30-5.8.d. However, the protection of the permit shield will continue to apply to operations and emissions that are not affected by the change, provided that the permittee complies with the terms and conditions of the permit applicable to such operations and emissions. The permit shield may be reinstated for emissions and operations affected by the change:
 - a. If subsequent changes cause the facility's operations and emissions to revert to those authorized in the permit and the permittee resumes compliance with the terms and conditions of the permit, or
 - b. If the permittee obtains final approval of a significant modification to the permit to incorporate the change in the permit.

[45CSR§30-5.8.c.]

2.11.4. "Section 502(b)(10) changes" are changes that contravene an express permit term. Such changes do not include changes that would violate applicable requirements or contravene enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.

[45CSR§30-2.39]

2.12. Reasonably Anticipated Operating Scenarios

- 2.12.1. The following are terms and conditions for reasonably anticipated operating scenarios identified in this permit.
 - a. Contemporaneously with making a change from one operating scenario to another, the permittee shall record in a log at the permitted facility a record of the scenario under which it is operating and to document the change in reports submitted pursuant to the terms of this permit and 45CSR30.
 - b. The permit shield shall extend to all terms and conditions under each such operating scenario; and
 - c. The terms and conditions of each such alternative scenario shall meet all applicable requirements and the requirements of 45CSR30.

[45CSR§30-5.1.i.]

2.13. Duty to Comply

2.13.1. The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the West Virginia Code and the Clean Air Act and is grounds for enforcement action by the Secretary or USEPA; for permit termination, revocation and reissuance, or modification; or for denial of a permit renewal application.

[45CSR§30-5.1.f.1.]

2.14. Inspection and Entry

- 2.14.1. The permittee shall allow any authorized representative of the Secretary, upon the presentation of credentials and other documents as may be required by law, to perform the following:
 - a. At all reasonable times (including all times in which the facility is in operation) enter upon the permittee's premises where a source is located or emissions related activity is conducted, or where records must be kept under the conditions of this permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times (including all times in which the facility is in operation) any facilities, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit;
 - d. Sample or monitor at reasonable times substances or parameters to determine compliance with the permit or applicable requirements or ascertain the amounts and types of air pollutants discharged.

[45CSR§30-5.3.b.]

2.15. Schedule of Compliance

- 2.15.1. For sources subject to a compliance schedule, certified progress reports shall be submitted consistent with the applicable schedule of compliance set forth in this permit and 45CSR§30-4.3.h., but at least every six (6) months, and no greater than once a month, and shall include the following:
 - a. Dates for achieving the activities, milestones, or compliance required in the schedule of compliance, and dates when such activities, milestones or compliance were achieved; and
 - b. An explanation of why any dates in the schedule of compliance were not or will not be met, and any preventative or corrective measure adopted.

[45CSR§30-5.3.d.]

2.16. Need to Halt or Reduce Activity not a Defense

2.16.1. It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit. However, nothing in this paragraph shall be construed as precluding consideration of a need to halt or reduce activity as a mitigating factor in determining penalties for noncompliance if the health, safety, or environmental impacts of halting or reducing operations would be more serious than the impacts of continued operations.

[45CSR§30-5.1.f.2.]

2.17. Emergency

2.17.1. An "emergency" means any situation arising from sudden and reasonably unforeseeable events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, and that causes the source to exceed a technology-based emission limitation under the permit, due to unavoidable increases in emissions attributable to the emergency. An emergency shall not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

[45CSR§30-5.7.a.]

2.17.2. Effect of any emergency. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions of 45CSR§30-5.7.c. are met.

[45CSR§30-5.7.b.]

- 2.17.3. The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - a. An emergency occurred and that the permittee can identify the cause(s) of the emergency;
 - b. The permitted facility was at the time being properly operated;
 - c. During the period of the emergency the permittee took all reasonable steps to minimize levels of emissions that exceeded the emission standards, or other requirements in the permit; and

d. Subject to the requirements of 45CSR§30-5.1.c.3.C.1, the permittee submitted notice of the emergency to the Secretary within one (1) working day of the time when emission limitations were exceeded due to the emergency and made a request for variance, and as applicable rules provide. This notice, report, and variance request fulfills the requirement of 45CSR§30-5.1.c.3.B. This notice must contain a detailed description of the emergency, any steps taken to mitigate emissions, and corrective actions taken.

[45CSR§30-5.7.c.]

2.17.4. In any enforcement proceeding, the permittee seeking to establish the occurrence of an emergency has the burden of proof.

[45CSR§30-5.7.d.]

2.17.5. This provision is in addition to any emergency or upset provision contained in any applicable requirement. [45CSR§30-5.7.e.]

2.18. Federally-Enforceable Requirements

2.18.1. All terms and conditions in this permit, including any provisions designed to limit a source's potential to emit and excepting those provisions that are specifically designated in the permit as "State-enforceable only", are enforceable by the Secretary, USEPA, and citizens under the Clean Air Act.

[45CSR§30-5.2.a.]

2.18.2. Those provisions specifically designated in the permit as "State-enforceable only" shall become "Federally-enforceable" requirements upon SIP approval by the USEPA.

2.19. Duty to Provide Information

2.19.1. The permittee shall furnish to the Secretary within a reasonable time any information the Secretary may request in writing to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit. Upon request, the permittee shall also furnish to the Secretary copies of records required to be kept by the permittee. For information claimed to be confidential, the permittee shall furnish such records to the Secretary along with a claim of confidentiality in accordance with 45CSR31. If confidential information is to be sent to USEPA, the permittee shall directly provide such information to USEPA along with a claim of confidentiality in accordance with 40 C.F.R. Part 2.

[45CSR§30-5.1.f.5.]

2.20. Duty to Supplement and Correct Information

2.20.1. Upon becoming aware of a failure to submit any relevant facts or a submittal of incorrect information in any permit application, the permittee shall promptly submit to the Secretary such supplemental facts or corrected information.

[45CSR§30-4.2.]

2.21. Permit Shield

2.21.1. Compliance with the conditions of this permit shall be deemed compliance with any applicable requirements as of the date of permit issuance provided that such applicable requirements are included and

are specifically identified in this permit or the Secretary has determined that other requirements specifically identified are not applicable to the source and this permit includes such a determination or a concise summary thereof.

[45CSR§30-5.6.a.]

- 2.21.2. Nothing in this permit shall alter or affect the following:
 - a. The liability of an owner or operator of a source for any violation of applicable requirements prior to or at the time of permit issuance; or
 - b. The applicable requirements of the Code of West Virginia and Title IV of the Clean Air Act (Acid Deposition Control), consistent with § 408 (a) of the Clean Air Act.
 - c. The authority of the Administrator of U.S. EPA to require information under § 114 of the Clean Air Act or to issue emergency orders under § 303 of the Clean Air Act.

[45CSR§30-5.6.c.]

2.22. Credible Evidence

2.22.1. Nothing in this permit shall alter or affect the ability of any person to establish compliance with, or a violation of, any applicable requirement through the use of credible evidence to the extent authorized by law. Nothing in this permit shall be construed to waive any defenses otherwise available to the permittee including but not limited to any challenge to the credible evidence rule in the context of any future proceeding.

[45CSR§30-5.3.e.3.B. and 45CSR38]

2.23. Severability

2.23.1. The provisions of this permit are severable. If any provision of this permit, or the application of any provision of this permit to any circumstance is held invalid by a court of competent jurisdiction, the remaining permit terms and conditions or their application to other circumstances shall remain in full force and effect.

[45CSR§30-5.1.e.]

2.24. Property Rights

2.24.1. This permit does not convey any property rights of any sort or any exclusive privilege. [45CSR§30-5.1.f.4]

2.25. Acid Deposition Control

- 2.25.1. Emissions shall not exceed any allowances that the source lawfully holds under Title IV of the Clean Air Act (Acid Deposition Control) or rules of the Secretary promulgated thereunder.
 - a. No permit revision shall be required for increases in emissions that are authorized by allowances acquired pursuant to the acid deposition control program, provided that such increases do not require a permit revision under any other applicable requirement.

- b. No limit shall be placed on the number of allowances held by the source. The source may not, however, use allowances as a defense to noncompliance with any other applicable requirement.
- c. Any such allowance shall be accounted for according to the procedures established in rules promulgated under Title IV of the Clean Air Act.

[45CSR§30-5.1.d.]

2.25.2. Where applicable requirements of the Clean Air Act are more stringent than any applicable requirement of regulations promulgated under Title IV of the Clean Air Act (Acid Deposition Control), both provisions shall be incorporated into the permit and shall be enforceable by the Secretary and U. S. EPA.

[45CSR§30-5.1.a.2.]

3.0 Facility-Wide Requirements

3.1. Limitations and Standards

- 3.1.1. **Open burning.** The open burning of refuse by any person is prohibited except as noted in 45CSR§6-3.1. [45CSR§6-3.1.]
- 3.1.2. **Open burning exemptions.** The exemptions listed in 45CSR§6-3.1 are subject to the following stipulation: Upon notification by the Secretary, no person shall cause or allow any form of open burning during existing or predicted periods of atmospheric stagnation. Notification shall be made by such means as the Secretary may deem necessary and feasible.

 [45CSR§6-3.2.]
- 3.1.3. **Asbestos.** The permittee is responsible for thoroughly inspecting the facility, or part of the facility, prior to commencement of demolition or renovation for the presence of asbestos and complying with 40 C.F.R. § 61.145, 40 C.F.R. § 61.148, and 40 C.F.R. § 61.150. The permittee, owner, or operator must notify the Secretary at least ten (10) working days prior to the commencement of any asbestos removal on the forms prescribed by the Secretary if the permittee is subject to the notification requirements of 40 C.F.R. § 61.145(b)(3)(i). The USEPA, the Division of Waste Management and the Bureau for Public Health Environmental Health require a copy of this notice to be sent to them.

[40 C.F.R. §61.145(b) and 45CSR34]

- 3.1.4. Odor. No person shall cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor at any location occupied by the public.
 [45CSR§4-3.1 State-Enforceable only.]
- 3.1.5. **Standby plan for reducing emissions.** When requested by the Secretary, the permittee shall prepare standby plans for reducing the emissions of air pollutants in accordance with the objectives set forth in Tables I, II, and III of 45CSR11.

 [45CSR\$11-5.2]
- 3.1.6. **Emission inventory.** The permittee is responsible for submitting, on an annual basis, an emission inventory in accordance with the submittal requirements of the Division of Air Quality. [W.Va. Code § 22-5-4(a)(14)]
- 3.1.7. **Ozone-depleting substances.** For those facilities performing maintenance, service, repair or disposal of appliances, the permittee shall comply with the standards for recycling and emissions reduction pursuant to 40 C.F.R. Part 82, Subpart F, except as provided for Motor Vehicle Air Conditioners (MVACs) in Subpart B:
 - a. Persons opening appliances for maintenance, service, repair, or disposal must comply with the prohibitions and required practices pursuant to 40 C.F.R. §§ 82.154 and 82.156.
 - b. Equipment used during the maintenance, service, repair, or disposal of appliances must comply with the standards for recycling and recovery equipment pursuant to 40 C.F.R. § 82.158.
 - c. Persons performing maintenance, service, repair, or disposal of appliances must be certified by an approved technician certification program pursuant to 40 C.F.R. § 82.161.

[40 C.F.R. 82, Subpart F]

3.1.8 **Risk Management Plan.** Should this stationary source, as defined in 40 C.F.R. § 68.3, become subject to Part 68, then the owner or operator shall submit a risk management plan (RMP) by the date specified in 40 C.F.R. § 68.10 and shall certify compliance with the requirements of Part 68 as part of the annual compliance certification as required by 40 C.F.R. Part 70 or 71.

[40 C.F.R. 68]

3.1.9. No person shall cause, suffer, allow or permit the emission into the open air from any source operation an in-stack sulfur dioxide concentration exceeding 2,000 parts per million by volume from existing source operations, except as provided in 45CSR§10-4.1.a through 45CSR§10-4.1.e.

[45CSR§10-4.1] [EN01 03, EN02, DEHY02]

3.1.10. No person shall cause, suffer, allow or permit the combustion of any refinery process gas stream or any other process gas stream that contains hydrogen sulfide in a concentration greater than 50 grains per 100 cubic feet of gas except in the case of a person operating in compliance with an emission control and mitigation plan approved by the Director and U. S. EPA. In certain cases very small units may be considered exempt from this requirement if, in the opinion of the Director, compliance would be economically unreasonable and if the contribution of the unit to the surrounding air quality could be considered negligible.

[45CSR§10-5.1] [EN01 03, EN02, DEHY02]

3.1.11. No person shall cause, suffer, allow or permit fugitive particulate matter to be discharged beyond the boundary lines of the property on which the discharge originates or at any public or residential location, which causes or contributes to statutory air pollution.

[45CSR§17-3.1]

3.1.12. Reserved. When emissions on an annual basis of one or more of the greenhouse gases listed below are greater than the *de minimis* amounts listed below, all greenhouse gases emitted above the *de minimis* amounts shall be reported to the Secretary under 45CSR§42-4. (see Section 3.5.):

Greenhouse Gas Compound	tons/year
carbon dioxide	10,000
methane	476
nitrous oxide	32.6
hydrofluorocarbons	0.855
perfluorocarbons	1.09
sulfur hexafluoride	0.42

[45CSR§42-3.1., State-Enforceable only.]

3.1.13. The Permittee shall comply with all applicable requirements of 40 C.F.R. Part 63 Subpart ZZZZ, Stationary Reciprocating Internal Combustion Engines by October 19, 2013 for the 1100 HP reciprocating engines with integral compressors.

[40 C.F.R. § 63.6595 (a) (1)][EN02, EN03]

3.1.14 As stated in 40 C.F.R. § 63.6603, the permittee must comply with the following requirements from 40 C.F.R. 63, Subpart ZZZZ, Table 2d for existing stationary RICE located at area sources of HAP emissions:

For each	The permittee must meet the following requirements, except during periods of startup
non-black start	Limit concentration of CO in the stationary RICE exhaust to 47 ppmvd at 15 percent O ₂ ; or Reduce CO emissions by 93 percent or more.

[40 C.F.R. § 63.6603(a), and Table 2d] [EN02, EN03]

- 3.1.15. The permittee shall comply with the following requirements:
 - a. The permittee must be in compliance with the emission limitations and operating limitations in this subpart that apply to the permittee at all times.
 - b. At all times the permittee must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the permittee to make any further efforts to reduce emissions if required levels have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

[40 C.F.R. § 63.6605] [EN02, EN03]

- 3.1.16. (a) You must demonstrate initial compliance with each emission and operating limitation that applies to you according to Table 5 of 40 C.F.R. Part 63 Subpart ZZZZ.
 - (b) During the initial performance test, you must establish each operating limitation in Tables 1b and 2b of 40 C.F.R. Part 63 Subpart ZZZZ that applies to you.
 - (c) You must submit the Notification of Compliance Status containing the results of the initial compliance demonstration according to the requirements in 40 C.F.R. § 63.6645.

[40 C.F.R. § 63.6630, Table 5] [EN02, EN03]

- 3.1.17. (a) If you must comply with emission and operating limitations, you must monitor and collect data according to this section.
 - (b) Except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously at all times that the stationary RICE is operating.
 - (c) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels. You must, however, use all the valid data collected during all other periods.

[40 C.F.R. § 63.6635] [EN02, EN03]

- 3.1.18. The permittee shall demonstrate continuous compliance by doing the following:
 - a. The permittee must demonstrate continuous compliance with each emission limitation and operating limitation in Table 2d of 40 C.F.R. 63 Subpart ZZZZ that apply to the permittee according to methods specified in Table 6 of 40 C.F.R. 63 Subpart ZZZZ.

Table 6 states that for work or management practices, the permittee shall operate and maintain the stationary RICE according to the manufacturer's emission related operation and maintenance instructions; or develop and follow your own maintenance plan which must provide to the extent practicable for the maintenance and operation of the engine in a manner consistent with good air pollution control practice for minimizing emissions.

- b. The permittee must report each instance in which you did not meet each emission limitation or operating limitation in and Table 2d of 40 C.F.R. 63 Subpart ZZZZ that apply. These instances are deviations from the emission and operating limitations. These deviations must be reported according to the requirements in 40 C.F.R. § 63.6650.
- c. The permittee must also report each instance in which the applicable requirements in Table 8 of 40 C.F.R. 63 Subpart ZZZZ were not met.

[40 C.F.R. §§ 63.6640 (a), (b), and (e)] [EN02, EN03]

3.1.19. The permittee shall comply with all General Provisions which apply according to Table 8 of 40 C.F.R. Part 63 Subpart ZZZZ.

[40 C.F.R. § 63.6665] [EN02, EN03]

3.2. Monitoring Requirements

3.2.1. At a minimum of once per year, sample and analyze the inlet gas stream to the station for the presence of total sulfur. Proof of compliance with the FERC limit for total sulfur of 20 grains/100ft³ will be considered demonstration of compliance with the requirements specified in Section 3.1.9 of this permit. Records shall be maintained on site or at a reasonably available location for a period of no less than five (5) years stating the date and time of the analysis and the amount of sulfur in the gas stream.

[45CSR§30-5.1.c] [EN01 03, EN02]

3.2.2. At a minimum of once per year, sample and analyze the inlet gas stream to the station utilizing gas chromatography for the presence of H₂S. Proof of compliance with the FERC (Federal Energy Regulatory Commission) limit of 0.25 grains/100ft³ will be considered demonstration of compliance with the requirement specified in Section 3.1.10 of this permit. Records shall be maintained on site or at a reasonably available location for a period of no less than five (5) years stating the date and time of the analysis and the amount of hydrogen sulfide in the gas stream.

[45CSR§30-5.1.c] [EN01 03, EN02]

3.2.3. At a minimum of once per year, sample and analyze the inlet gas stream to the station utilizing gas chromatography for the presence of Sulfur. Proof of compliance with the 2000 ppm_v limit will be considered demonstrated if the gas chromatograph shows a total sulfur content of 5.60 grains/100ft³ or less. Records shall be maintained on site or at a reasonable available location for a period of no less than five (5) years stating the date and time of analysis and the sulfur content of the gas sampled.

[45CSR§30-5.1.c] [DEHY02]

3.2.4. At a minimum of once per year, sample and analyze the inlet gas stream to the station utilizing gas

chromatography for the presence of H_2S . Proof of compliance with the 50 grains/100ft³ limit will be considered demonstrated if the gas chromatograph shows a total H_2S content of 0.4388 grains/100ft³ or less. Records shall be maintained on site or at a reasonably available location stating the date of analysis and the hydrogen sulfide content of the gas sampled.

[45CSR§30-5.1.c] [DEHY02]

- 3.2.5. This facility is subject to the following requirements:
 - (a) If you elect to install a CEMS as specified in Table 5 of 40 C.F.R. Part 63 Subpart ZZZZ, you must install, operate, and maintain a CEMS to monitor CO and either oxygen or CO₂ at both the inlet and the outlet of the control device according to the requirements in 40 C.F.R. §§ 63.6625 (a) (1) through (4).
 - (1) Each CEMS must be installed, operated, and maintained according to the applicable performance specifications of 40 C.F.R. Part 60 Appendix B.
 - (2) You must conduct an initial performance evaluation and an annual relative accuracy test audit (RATA) of each CEMS according to the requirements in 40 C.F.R. § 63.8 and according to the applicable performance specifications of 40 C.F.R. Part 60 Appendix B as well as daily and periodic data quality checks in accordance with 40 C.F.R. Part 60 Appendix F, procedure 1.
 - (3) As specified in 40 C.F.R. § 63.8 (c) (4) (ii), each CEMS must complete a minimum of one cycle of operation (sampling, analyzing, and data recording) for each successive 15-minute period. You must have at least two data points, with each representing a different 15-minute period, to have a valid hour of data.
 - (4) The CEMS data must be reduced as specified in 40 C.F.R. § 63.8 (g) (2) and recorded in parts per million or parts per billion (as appropriate for the applicable limitation) at 15 percent oxygen or the equivalent CO₂ concentration.

[40 C.F.R. § 63.6625 (a)]

- (b) If you are required to install a continuous parameter monitoring system (CPMS) as specified in Table 5 of 40 C.F.R. Part 63 Subpart ZZZZ, you must install, operate, and maintain each CPMS according to the requirements in 40 C.F.R. §§ 63.6625 (b) (1) through (8).
 - (1) The CPMS must complete a minimum of one cycle of operation for each successive 15-minute period. You must have a minimum of four successive cycles of operation to have a valid hour of data.
 - (2) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must conduct all monitoring in continuous operation at all times that the unit is operating. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.
 - (3) For purposes of calculating data averages, you must not use data recorded during monitoring malfunctions, associated repairs, out of control periods, or required quality assurance or control activities. You must use all the data collected during all other periods in assessing compliance. Any 15-minute period for which the monitoring system

- is out-of-control and data are not available for required calculations constitutes a deviation from the monitoring requirements.
- (4) Determine the 3-hour block average of all recorded readings, except as provided in 40 C.F.R. § 63.6625 (b) (3).
- (5) Record the results of each inspection, calibration, and validation check.
- (6) You must develop a site-specific monitoring plan that addresses 40 C.F.R. §§ 63.6625 (b) (6) (i) through (vi).
 - (i) Installation of the CPMS sampling probe or other interface at the appropriate location to obtain representative measurements;
 - (ii) Performance and equipment specifications for the sample interface, parametric signal analyzer, and the data collection and reduction systems;
 - (iii) Performance evaluation procedures and acceptance criteria (e.g., calibrations);
 - (iv) Ongoing operation and maintenance procedures in accordance with the general requirements of 40 C.F.R. §§ 63.8 (c) (1), (c) (3), and (c) (4) (ii);
 - (v) Ongoing data quality assurance procedures in accordance with the general requirements of 40 C.F.R. § 63.8 (d); and
 - (vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of 40 C.F.R. §§ 63.10 (c), (e) (1), and (e) (2) (i).
- (7) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.
- (8) You must operate and maintain the CPMS in continuous operation according to the site-specific monitoring plan.

[40 C.F.R. § 63.6625 (b)]

(c) If you operate a new, reconstructed, or existing stationary engine, you must minimize the engine's time spent at idle during startup and minimize the engine's startup time to a period needed for appropriate and safe loading of the engine, not to exceed 30 minutes, after which time the emission standards applicable to all times other than startup in Tables 1a, 2a, 2c, and 2d to 40 C.F.R. 63 Subpart ZZZZ apply.

[40 C.F.R. § 63.6625 (h)]

- (d) If you have an operating limitation that requires the use of a temperature measurement device, you must meet the requirements in 40 C.F.R. §§ 63.6625 (k) (1) through (4).
 - (1) Locate the temperature sensor and other necessary equipment in a position that provides a representative temperature.
 - (2) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 1.0 percent of the temperature value, whichever is larger, for a noncryogenic temperature range.

- (3) Use a temperature sensor with a minimum tolerance of 2.8 degrees Celsius (5 degrees Fahrenheit), or 2.5 percent of the temperature value, whichever is larger, for a cryogenic temperature range.
- (4) Conduct a temperature measurement device calibration check at least every 3 months.

[40 C.F.R. § 63.6625 (k)]

[40 C.F.R. § 63.6625] [EN02, EN03]

3.3. Testing Requirements

- 3.3.1. **Stack testing.** As per provisions set forth in this permit or as otherwise required by the Secretary, in accordance with the West Virginia Code, underlying regulations, permits and orders, the permittee shall conduct test(s) to determine compliance with the emission limitations set forth in this permit and/or established or set forth in underlying documents. The Secretary, or his duly authorized representative, may at his option witness or conduct such test(s). Should the Secretary exercise his option to conduct such test(s), the operator shall provide all necessary sampling connections and sampling ports to be located in such manner as the Secretary may require, power for test equipment and the required safety equipment, such as scaffolding, railings and ladders, to comply with generally accepted good safety practices. Such tests shall be conducted in accordance with the methods and procedures set forth in this permit or as otherwise approved or specified by the Secretary in accordance with the following:
 - a. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with 40 C.F.R. Parts 60, 61, and 63, if applicable, in accordance with the Secretary's delegated authority and any established equivalency determination methods which are applicable.
 - b. The Secretary may on a source-specific basis approve or specify additional testing or alternative testing to the test methods specified in the permit for demonstrating compliance with applicable requirements which do not involve federal delegation. In specifying or approving such alternative testing to the test methods, the Secretary, to the extent possible, shall utilize the same equivalency criteria as would be used in approving such changes under Section 3.3.1.a. of this permit.
 - c. All periodic tests to determine mass emission limits from or air pollutant concentrations in discharge stacks and such other tests as specified in this permit shall be conducted in accordance with an approved test protocol. Unless previously approved, such protocols shall be submitted to the Secretary in writing at least thirty (30) days prior to any testing and shall contain the information set forth by the Secretary. In addition, the permittee shall notify the Secretary at least fifteen (15) days prior to any testing so the Secretary may have the opportunity to observe such tests. This notification shall include the actual date and time during which the test will be conducted and, if appropriate, verification that the tests will fully conform to a referenced protocol previously approved by the Secretary.
 - d. The permittee shall submit a report of the results of the stack test within 60 days of completion of the test. The test report shall provide the information necessary to document the objectives of the test and to determine whether proper procedures were used to accomplish these objectives. The report shall include the following: the certification described in paragraph 3.5.1; a statement of compliance status, also signed by a responsible official; and, a summary of conditions which form the basis for the compliance status evaluation. The summary of conditions shall include the following:

- 1. The permit or rule evaluated, with the citation number and language.
- 2. The result of the test for each permit or rule condition.
- 3. A statement of compliance or non-compliance with each permit or rule condition.

[WV Code §§ 22-5-4(a)(14-15) and 45CSR13]

3.3.2 If you must comply with the emission limitations and operating limitations, you must conduct subsequent performance tests as specified in Table 3 of 40 C.F.R. Part 63 Subpart ZZZZ.

[40 C.F.R. § 63.6615] [EN02, EN03]

- 3.3.3. (a) You must conduct each performance test in Tables 3 and 4 of 40 C.F.R. Part 63 Subpart ZZZZ that applies to you.
 - (b) Each performance test must be conducted according to the requirements that 40 C.F.R. Part 63 Subpart ZZZZ specifies in Table 4. If you own or operate a non-operational stationary RICE that is subject to performance testing, you do not need to start up the engine solely to conduct the performance test. Owners and operators of a non-operational engine can conduct the performance test when the engine is started up again.
 - (c) [Reserved]
 - (d) You must conduct three separate test runs for each performance test required in this section, as specified in 40 C.F.R. § 63.7 (e) (3). Each test run must last at least 1 hour.
 - (e) You must use Equation 1 of this section to determine compliance with the percent reduction requirement:

$$[(C_i - C_o) / C_i] \times 100 - R$$
 (Eq. 1)

Where:

C_i = concentration of CO or formaldehyde at the control device inlet,

 C_o = concentration of CO or formaldehyde at the control device outlet, and

R = percent reduction of CO or formaldehyde emissions.

- You must normalize the carbon monoxide (CO) or formaldehyde concentrations at the inlet and outlet of the control device to a dry basis and to 15 percent oxygen, or an equivalent percent carbon dioxide (CO₂). If pollutant concentrations are to be corrected to 15 percent oxygen and CO₂ concentration is measured in lieu of oxygen concentration measurement, a CO₂ correction factor is needed. Calculate the CO₂ correction factor as described in 40 C.F.R. §§ 63.6620 (e) (2) (i) through (iii).
 - (i) Calculate the fuel-specific F_0 value for the fuel burned during the test using values obtained from Method 19, section 5.2, and the following equation:

$$F_0 = (0.209 F_d / F_c)$$
 (Eq. 2)

Where:

 F_o = Fuel factor based on the ratio of oxygen volume to the ultimate CO_2 volume produced by the fuel at zero percent excess air.

0.209 = Fraction of air that is oxygen, percent/100.

F_d = Ratio of the volume of dry effluent gas to the gross calorific value of the fuel from Method 19, dsm³/J (dscf/10⁶ Btu).

 F_c = Ratio of the volume of CO_2 produced to the gross calorific value of the fuel from Method 19, dsm^3/J ($dscf/10^6$ Btu).

(ii) Calculate the CO₂ correction factor for correcting measurement data to 15 percent oxygen, as follows:

$$\mathbf{X}_{CO2} = [5.9 / \mathbf{F}_0] \qquad (Eq. 3)$$

Where:

 X_{CO2} = CO_2 correction factor, percent.

5.9 = 20.9 percent $O_2 - 15$ percent O_2 , the defined O_2 correction value, percent.

(iii) Calculate the NO_X and SO_2 gas concentrations adjusted to 15 percent O_2 using CO_2 as follows:

$$C_{adj} = [C_d(X_{CO2} / \%CO_2)]$$
 (Eq. 4)

Where:

 $%CO_2$ = Measured CO_2 concentration measured, dry basis, percent.

- (f) If you comply with the emission limitation to reduce CO and you are not using an oxidation catalyst, if you comply with the emission limitation to reduce formaldehyde and you are not using NSCR, or if you comply with the emission limitation to limit the concentration of formaldehyde in the stationary RICE exhaust and you are not using an oxidation catalyst or NSCR, you must petition the Administrator for operating limitations to be established during the initial performance test and continuously monitored thereafter; or for approval of no operating limitations. You must not conduct the initial performance test until after the petition has been approved by the Administrator.
- (g) If you petition the Administrator for approval of operating limitations, your petition must include the information described in 40 C.F.R. §§ 63.6620 (g) (1) through (5).
 - (1) Identification of the specific parameters you propose to use as operating limitations;
 - (2) A discussion of the relationship between these parameters and HAP emissions, identifying how HAP emissions change with changes in these parameters, and how limitations on these parameters will serve to limit HAP emissions;

- (3) A discussion of how you will establish the upper and/or lower values for these parameters which will establish the limits on these parameters in the operating limitations;
- (4) A discussion identifying the methods you will use to measure and the instruments you will use to monitor these parameters, as well as the relative accuracy and precision of these methods and instruments; and
- (5) A discussion identifying the frequency and methods for recalibrating the instruments you will use for monitoring these parameters.
- (h) If you petition the Administrator for approval of no operating limitations, your petition must include the information described in 40 C.F.R. §§ 63.6620 (h) (1) through (7).
 - (1) Identification of the parameters associated with operation of the stationary RICE and any emission control device which could change intentionally (*e.g.*, operator adjustment, automatic controller adjustment, etc.) or unintentionally (*e.g.*, wear and tear, error, etc.) on a routine basis or over time;
 - (2) A discussion of the relationship, if any, between changes in the parameters and changes in HAP emissions:
 - (3) For the parameters which could change in such a way as to increase HAP emissions, a discussion of whether establishing limitations on the parameters would serve to limit HAP emissions:
 - (4) For the parameters which could change in such a way as to increase HAP emissions, a discussion of how you could establish upper and/or lower values for the parameters which would establish limits on the parameters in operating limitations;
 - (5) For the parameters, a discussion identifying the methods you could use to measure them and the instruments you could use to monitor them, as well as the relative accuracy and precision of the methods and instruments;
 - (6) For the parameters, a discussion identifying the frequency and methods for recalibrating the instruments you could use to monitor them; and
 - (7) A discussion of why, from your point of view, it is infeasible or unreasonable to adopt the parameters as operating limitations.
- (i) The engine percent load during a performance test must be determined by documenting the calculations, assumptions, and measurement devices used to measure or estimate the percent load in a specific application. A written report of the average percent load determination must be included in the notification of compliance status. The following information must be included in the written report: the engine model number, the engine manufacturer, the year of purchase, the manufacturer's site-rated brake horsepower, the ambient temperature, pressure, and humidity during the performance test, and all assumptions that were made to estimate or calculate percent load during the performance test must be clearly explained. If measurement devices such as flow meters, kilowatt meters, beta analyzers, stain gauges, etc. are used, the model number of the measurement device, and an estimate of its accurate in percentage of true value must be provided.

[40 C.F.R. § 63.6620] [EN02, EN03]

3.4. Recordkeeping Requirements

- 3.4.1. **Monitoring information.** The permittee shall keep records of monitoring information that include the following:
 - a. The date, place as defined in this permit and time of sampling or measurements;
 - b. The date(s) analyses were performed;
 - c. The company or entity that performed the analyses;
 - d. The analytical techniques or methods used;
 - e. The results of the analyses; and
 - f. The operating conditions existing at the time of sampling or measurement.

[45CSR§30-5.1.c.2.A; 45CSR13, R13-2837, 4.3.1.]

3.4.2. **Retention of records.** The permittee shall retain records of all required monitoring data and support information for a period of at least five (5) years from the date of monitoring sample, measurement, report, application, or record creation date. Support information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation, and copies of all reports required by the permit. Where appropriate, records may be maintained in computerized form in lieu of the above records.

[45CSR§30-5.1.c.2.B.]

- 3.4.3. **Odors.** For the purposes of 45CSR4, the permittee shall maintain a record of all odor complaints received, any investigation performed in response to such a complaint, and any responsive action(s) taken. **[45CSR§30-5.1.c. State-Enforceable only.]**
- 3.4.4 If the permittee must comply with the emission and operating limitations, the permittee must keep the following records:
 - a. A copy of each notification and report submitted to comply with this subpart, including all documentation supporting any Initial Notification or Notification of Compliance Status submitted, according to the requirement in 40 C.F.R. § 63.10 (b) (2) (xiv).
 - b. Records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment) or the air pollution control and monitoring equipment.
 - c. Records of performance tests and performance evaluations as required in 40 C.F.R. § **63**.10 (b) (2) (viii).
 - d. Records of all required maintenance performed on the air pollution control and monitoring equipment.

e. Records of actions taken during periods of malfunction to minimize emissions in accordance with 40 C.F.R. § **63**.6605 (b), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

[40 C.F.R. § 63.6655 (a)] [EN02, EN03]

- 3.4.5. For each CEMS or CPMS, you must keep the records listed in 40 C.F.R. §§ 63.6655 (b) (1) through (3).
 - (1) Records described in 40 C.F.R. § 63.10 (b) (2) (vi) through (xi).
 - (2) Previous (*i.e.*, superseded) versions of the performance evaluation plan as required in 40 C.F.R. § 63.8 (d) (3).
 - (3) Requests for alternatives to the relative accuracy test for CEMS or CPMS as required in 40 C.F.R. § 63.8 (f) (6) (i), if applicable.

[40 C.F.R. § 63.6655 (b)] [EN02, EN03]

3.4.6. Records of the monitoring required in Section 3.2.5 shall be kept. [40 C.F.R. § 63.6655 (d)] [EN02, EN03]

3.5. Reporting Requirements

3.5.1. **Responsible official.** Any application form, report, or compliance certification required by this permit to be submitted to the DAQ and/or USEPA shall contain a certification by the responsible official that states that, based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate and complete.

[45CSR§§30-4.4. and 5.1.c.3.D.]

3.5.2. A permittee may request confidential treatment for the submission of reporting required under 45CSR§30-5.1.c.3. pursuant to the limitations and procedures of W.Va. Code § 22-5-10 and 45CSR31.

[45CSR§30-5.1.c.3.E.]

3.5.3. Except for the electronic submittal of the annual certification to the USEPA as required in 3.5.5 below, all notices, requests, demands, submissions and other communications required or permitted to be made to the Secretary of DEP and/or USEPA shall be made in writing and shall be deemed to have been duly given when delivered by hand, mailed first class or by private carrier with postage prepaid to the address(es) set forth below or to such other person or address as the Secretary of the Department of Environmental Protection may designate:

If to the DAQ: If to the US EPA:

Director

WVDEP Associate Director

Division of Air Quality Office of Enforcement and Permits Review

601 57th Street SE (3AP12)

Charleston, WV 25304 U. S. Environmental Protection Agency

Region III

Phone: 304/926-0475 1650 Arch Street

FAX: 304/926-0478 Philadelphia, PA 19103-2029

- 3.5.4. Certified emissions statement. The permittee shall submit a certified emissions statement and pay fees on an annual basis in accordance with the submittal requirements of the Division of Air Quality. [45CSR§30-8.]
- 3.5.5. **Compliance certification.** The permittee shall certify compliance with the conditions of this permit on the forms provided by the DAQ. In addition to the annual compliance certification, the permittee may be required to submit certifications more frequently under an applicable requirement of this permit. The annual certification shall be submitted to the DAQ and USEPA on or before March 15 of each year, and shall certify compliance for the period ending December 31. The annual certification to the USEPA shall be submitted in electronic format only. It shall be submitted by e-mail to the following address: R3_APD_Permits@epa.gov. The permittee shall maintain a copy of the certification on site for five (5) years from submittal of the certification.
- 3.5.6. **Semi-annual monitoring reports.** The permittee shall submit reports of any required monitoring on or before September 15 for the reporting period January 1 to June 30 and on or before March 15 for the reporting period July 1 to December 31. All instances of deviation from permit requirements must be clearly identified in such reports. All required reports must be certified by a responsible official consistent with 45CSR§30-4.4.

[45CSR§30-5.1.c.3.A.]

[45CSR§30-5.3.e.]

- 3.5.7. **Emergencies.** For reporting emergency situations, refer to Section 2.17 of this permit.
- 3.5.8. **Deviations.**
 - a. In addition to monitoring reports required by this permit, the permittee shall promptly submit supplemental reports and notices in accordance with the following:
 - 1. Any deviation resulting from an emergency or upset condition, as defined in 45CSR§30-5.7., shall be reported by telephone or telefax within one (1) working day of the date on which the permittee becomes aware of the deviation, if the permittee desires to assert the affirmative defense in accordance with 45CSR§30-5.7. A written report of such deviation, which shall include the probable cause of such deviations, and any corrective actions or preventative measures taken, shall be submitted and certified by a responsible official within ten (10) days of the deviation.
 - 2. Any deviation that poses an imminent and substantial danger to public health, safety, or the environment shall be reported to the Secretary immediately by telephone or telefax. A written report of such deviation, which shall include the probable cause of such deviation, and any corrective actions or preventative measures taken, shall be submitted by the responsible official within ten (10) days of the deviation.
 - 3. Deviations for which more frequent reporting is required under this permit shall be reported on the more frequent basis.
 - 4. All reports of deviations shall identify the probable cause of the deviation and any corrective actions or preventative measures taken.

[45CSR§30-5.1.c.3.C.]

- b. The permittee shall, in the reporting of deviations from permit requirements, including those attributable to upset conditions as defined in this permit, report the probable cause of such deviations and any corrective actions or preventive measures taken in accordance with any rules of the Secretary. [45CSR§30-5.1.c.3.B.]
- 3.5.9. **New applicable requirements.** If any applicable requirement is promulgated during the term of this permit, the permittee will meet such requirements on a timely basis, or in accordance with a more detailed schedule if required by the applicable requirement.

 [45CSR\$30-4.3.h.1.B.]
- 3.5.10. Reserved. Greenhouse Gas Reporting Requirements. When applicable, as determined in permit section 3.1., greenhouse gas emissions shall be reported pursuant to 45CSR§42 4. including the following:
 - a. In accordance with a reporting cycle provided by the Secretary, affected sources shall report to the Secretary the quantity of all greenhouse gases emitted above *de minimis* amounts in the years specified by the Secretary.

[45CSR§42-4.1., State-Enforceable only.]

b. Affected sources shall only be required to report annual quantities of anthropogenic non-mobile source greenhouse gases emitted at the stationary source, and shall not be required to report biogenic emissions of greenhouse gases.

[45CSR§42-4.2., State-Enforceable only.]

- e. Reports of greenhouse gas emissions submitted to the Secretary under 45CSR§42-4. shall be signed by a responsible official and shall include the following certification statement: "I, the undersigned, hereby certify that the data transmitted to the West Virginia Department of Environmental Protection is true, accurate, and complete, based upon information and belief formed after reasonable inquiry."

 [45CSR§42-4.5., State-Enforceable only.]
- 3.5.11 You must submit each report in Table 7 of 40 C.F.R. Part 63 Subpart ZZZZ that applies to you. [40 C.F.R. § 63.6650 (a)] [EN02, EN03]
- 3.5.12. Unless the Administrator has approved a different schedule for submission of reports under 40 C.F.R. § 63.10 (a), you must submit each report by the date in Table 7 of 40 C.F.R. Part 63 Subpart ZZZZ and according to the requirements in 40 C.F.R. §§ 63.6650 (b) (1) through (b) (9).
 - (1) For semiannual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 C.F.R. § 63.6595 and ending on June 30 or December 31, whichever date is the first date following the end of the first calendar half after the compliance date that is specified for your source in 40 C.F.R. § 63.6595.
 - (2) For semiannual Compliance reports, the first Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date follows the end of the first calendar half after the compliance date that is specified for your affected source in 40 C.F.R. § 63.6595.
 - (3) For semiannual Compliance reports, each subsequent Compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

- (4) For semiannual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date is the first date following the end of the semiannual reporting period.
- (5) For each stationary RICE that is subject to permitting regulations pursuant to 40 CFR part 70 or 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6 (a) (3) (iii) (A) or 40 CFR 71.6 (a) (3) (iii) (A), you may submit the first and subsequent Compliance reports according to the dates the permitting authority has established instead of according to the dates in 40 C.F.R. §§ 63.6650 (b) (1) through (b) (4).
- (6) For annual Compliance reports, the first Compliance report must cover the period beginning on the compliance date that is specified for your affected source in 40 C.F.R. § 63.6595 and ending on December 31.
- (7) For annual Compliance reports, the first Compliance report must be postmarked or delivered no later than January 31 following the end of the first calendar year after the compliance date that is specified for your affected source in 40 C.F.R. § 63.6595.
- (8) For annual Compliance reports, each subsequent Compliance report must cover the annual reporting period from January 1 through December 31.
- (9) For annual Compliance reports, each subsequent Compliance report must be postmarked or delivered no later than January 31.

[40 C.F.R. § 63.6650 (b)] [EN02, EN03]

- 3.5.13. The Compliance report must contain the information in 40 C.F.R. §§ 63.6650 (c) (1) through (6).
 - (1) Company name and address.
 - (2) Statement by a responsible official, with that official's name, title, and signature, certifying the accuracy of the content of the report.
 - (3) Date of report and beginning and ending dates of the reporting period.
 - (4) If you had a malfunction during the reporting period, the compliance report must include the number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with 40 C.F.R. § 63.6605 (b), including actions taken to correct a malfunction.
 - (5) If there are no deviations from any emission or operating limitations that apply to you, a statement that there were no deviations from the emission or operating limitations during the reporting period.
 - (6) If there were no periods during which the continuous monitoring system (CMS), including CEMS and CPMS, was out-of-control, as specified in 40 C.F.R. § 63.8 (c) (7), a statement that there were no periods during which the CMS was out-of-control during the reporting period.

[40 C.F.R. § 63.6650 (c)] [EN02, EN03]

- 3.5.14. For each deviation from an emission or operating limitation that occurs for a stationary RICE not using a CMS to comply with the emission or operating limitations in 40 C.F.R. 63, Subpart ZZZZ, the Compliance report must contain the information specified in 40 C.F.R. §§ 63.6650 (c) (1) through (4) in addition to the following information:
 - a. The total operating time of the stationary RICE at which the deviation occurred during the reporting period.
 - b. Information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

[40 C.F.R. § 63.6650 (d)] [EN02, EN03]

- 3.5.15. For each deviation from an emission or operating limitation occurring for a stationary RICE where you are using a CMS to comply with the emission and operating limitations in this subpart, you must include information in 40 C.F.R. §§ 63.6650 (c) (1) through (4) and (e) (1) through (12).
 - (1) The date and time that each malfunction started and stopped.
 - (2) The date, time, and duration that each CMS was inoperative, except for zero (low-level) and high-level checks.
 - (3) The date, time, and duration that each CMS was out-of-control, including the information in 40 C.F.R. § 63.8 (c) (8).
 - (4) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of malfunction or during another period.
 - (5) A summary of the total duration of the deviation during the reporting period, and the total duration as a percent of the total source operating time during that reporting period.
 - (6) A breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.
 - (7) A summary of the total duration of CMS downtime during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the stationary RICE at which the CMS downtime occurred during that reporting period.
 - (8) An identification of each parameter and pollutant (CO or formaldehyde) that was monitored at the stationary RICE.
 - (9) A brief description of the stationary RICE.
 - (10) A brief description of the CMS.
 - (11) The date of the latest CMS certification or audit.
 - (12) A description of any changes in CMS, processes, or controls since the last reporting period.

[40 C.F.R. § 63.6650 (e)] [EN02, EN03]

3.5.16. Each affected source that has obtained a title V operating permit pursuant to 40 C.F.R. Part 70 or 71 must

report all deviations as defined in this subpart in the semiannual monitoring report required by 40 C.F.R. § 70.6 (a) (3) (iii) (A) or 40 C.F.R. § 71.6 (a) (3) (iii) (A). If an affected source submits a Compliance report pursuant to Table 7 of this subpart along with, or as part of, the semiannual monitoring report required by 40 C.F.R. § 70.6 (a) (3) (iii) (A) or 40 C.F.R. § 71.6 (a) (3) (iii) (A), and the Compliance report includes all required information concerning deviations from any emission or operating limitation in this subpart, submission of the Compliance report shall be deemed to satisfy any obligation to report the same deviations in the semiannual monitoring report. However, submission of a Compliance report shall not otherwise affect any obligation the affected source may have to report deviations from permit requirements to the permit authority.

[40 C.F.R. § 63.6650 (f)] [EN02, EN03]

3.6. Compliance Plan

3.6.1. N/A

3.7. Permit Shield

- 3.7.1. The permittee is hereby granted a permit shield in accordance with 45CSR§30-5.6. The permit shield applies provided the permittee operates in accordance with the information contained within this permit.
- 3.7.2. The following requirements specifically identified are not applicable to the source based on the determinations set forth below. The permit shield shall apply to the following requirements provided the conditions of the determinations are met.

 N/A

3.8. Emergency Operating Scenario

For emergency situations which interrupt the critical supply of natural gas to the public, and which pose a life threatening circumstance to the customer, the permittee is allowed to temporarily replace failed engine(s) as long as all of the following conditions are met:

- a. The replacement engine(s) is only allowed to operate until repair of the failed engine(s) is complete, but under no circumstance may the replacement engine(s) operate in excess of sixty (60) days;
- b. Both the replacement engine(s) and the repaired failed engine(s) shall not operate at the same time with the exception of any necessary testing of the repaired engine(s) and this testing may not exceed five (5) hours;
- c. Potential hourly emissions from the replacement engine(s) are less than or equal to the potential hourly emissions from the engine(s) being replaced;
- d. Credible performance emission test data verifying the emission rates associated with the operation of the substitute engine shall be submitted to the Director within five (5) days;
- e. The permittee must provide written notification to the Director within five (5) days of the replacement. This notification must contain:
 - i. Information to support the claim of life threatening circumstances to justify applicability of this emergency provision;
 - ii. Identification of the engine(s) being temporarily replaced;

- iii. The design parameters of the replacement engine(s) including, but not limited to, the design horsepower and emission factors;
- iv. Projected duration of the replacement engine(s); and
- v. The appropriate certification by a responsible official.

[45CSR§30-12.7]

4.0 Source-Specific Requirements [RBR0102]

4.1. Limitations and Standards

4.1.1. No person shall cause, suffer, allow or permit emission of smoke and/or particulate matter into the open air from any fuel burning unit which is greater than ten (10) percent opacity based on a six minute block average.

[45CSR§2-3.1]

4.2. Monitoring Requirements

N/A

4.3. Testing Requirements

N/A

4.4. Recordkeeping Requirements

N/A

4.5. Reporting Requirements

N/A

4.6. Compliance Plan

N/A

5.0 Source-Specific Requirements [F1 DEHY02 and Flare F2]

5.1. Limitations and Standards

5.1.1. No person shall cause, suffer, allow or permit particulate matter to be discharged from any incinerator into the open air in excess of the quantity determined by use of the following formula:

Emissions (lb/hr) = F x Incinerator Capacity (tons/hr)

Where, the factor, F, is as indicated in Table I below:

Table I: Factor, F, for Determining Maximum Allowable Particulate Emissions

Incinerator Capacity: Factor F A. Less than 15,000 lbs/hr 5.43 B. 15,000 lbs/hr or greater 2.72

Calculation for PM Emissions:

(5.43) x (95.0 cf/min) x (60 min/hr) x (0.0765 lb/cf) (604lb/hr) x (ton/2000 lb)

 $= \frac{1.18}{1.64}$ lb/hr [45CSR§6-4.1]

- 5.1.2. Visible particulate matter emissions from the flare (F42) shall not exceed 20% opacity except for smoke which is less than 40% opacity for a period or periods aggregating no more than eight minutes per start-up. [45CSR§6-4.3 & 45CSR§6-4.4; 45CSR13, R13-2837, 4.1.5.]
- 5.1.3. No person shall cause, suffer, allow or permit the emission of particles of unburned or partially burned refuse or ash from any incinerator which are large enough to be individually distinguished in the open air. [45CSR§6-4.5]
- 5.1.4. Incinerators, including all associated equipment and grounds, shall be designed, operated and maintained so as to prevent the emission of objectionable odors.

 [45CSR§6-4.6; 45CSR13, R13-2837, 4.1.6.]
- 5.1.5. The maximum wet natural gas throughput to the dehydration unit shall not exceed 14 23 mmscf/day. Compliance with this limit shall be determined using a twelve month rolling total. A twelve month rolling total shall mean the sum of the monthly throughput at any given time during the previous twelve consecutive calendar months.

[45CSR13, R13-2837, 4.1.1.]

5.1.6. Maximum emissions from the flare (F1) shall not exceed the following:

The applicant shall not cause, suffer, allow or permit aggregate emissions of hazardous air pollutants (HAPs) to exceed the potential to emit (pounds per hour and tons per year) recorded below:

Pollutant	Hourly Emissions	Annual Emissions
	<u>(lb/hr)</u>	<u>(tpy)</u>
NO_x	0.20 0.22	0.90- <u>0.95</u>
CO	<u>1.11 0.02</u>	4.87-0.09
PM	0.03	0.10
SO ₂	0.01	0.01
VOC	4.81 <u>6.90</u>	21.03 <u>30.22</u>
Benzene	0.05 <u>0.11</u>	0.19 <u>0.49</u>
Ethylbenzene	0.04 <u>0.07</u>	0.17 <u>0.37</u>
Hexane	0.02 <u>0.06</u>	0.10 0.28
Toluene	0.17 <u>0.21</u>	0.73 - <u>0.90</u>
Xylene	0.62 <u>0.45</u>	2.70 <u>1.98</u>
Total HAPs	0.90 <u>0.91</u>	3.90 <u>3.98</u>

[45CSR13, R13-2837, 4.1.2.]

Note: Meeting the PM limit of 0.03 lb/hr specified in this section shall show compliance with 45CSR6 limit of 1.18 lb/hr in Section 5.1.1.

- 5.1.7. Reserved. Flare F1 shall control emissions from the dehydration unit (DEHY). Said flare shall be designed, operated and maintained so as to provide at least a 95% destruction efficiency for VOC/HAPs. [45CSR13, R13-2837, 4.1.3.]
- 5.1.8. Flare F1 shall be designed and operated in accordance with 40 C.F.R. §63.11(b). Flares subject to this section shall be designed and operated in accordance with the following:
 - <u>a.</u> <u>Flares shall be steam-assisted, air-assisted, or non-assisted.</u>
 - b. Flares shall be designed for and operated with no visible emissions, except for periods not to exceed a total of 5 minutes during any 2 consecutive hours.
 - c. Flares shall be operated, with a flame present at all times whenever emissions may be vented to them, except during SSM (Startup, Shutdown, Mafunctions) events.
 - d. A flare shall be used only where the net heating value of the gas being combusted is 11.2 MJ/scm (300 Btu/scf) or greater if the flare is steam-assisted or air-assisted; or where the net heating value of the gas being combusted is 7.45 MJ/scm (200 Btu/scf) or greater if the flare is non-assisted. The net heating value of the gas being combusted in a flare shall be calculated using the following equation:

$$H_T = K \sum_{i=1}^n C_i H_i$$

Where:

 $\underline{\text{H}_{\text{T}}}$ =Net heating value of the sample, MJ/scm; where the net enthalpy per mole of off gas is based on combustion at 25 °C and 760 mm Hg, but the standard temperature for determining the volume corresponding to one mole is 20 °C.

K=Constant=

$$1.740 \times 10^{-7} \left(\frac{1}{ppmv}\right) \left(\frac{g \cdot \text{mole}}{\text{scm}}\right) \left(\frac{\text{MJ}}{\text{kcal}}\right)$$

where the standard temperature for (g-mole/scm) is 20 °C.

 C_i =Concentration of sample component i in ppmv on a wet basis, which may be measured for organics by Test Method 18, but is not required to be measured using Method 18 (unless designated by the Director). H_i=Net heat of combustion of sample component i, kcal/g-mole at 25 °C and 760 mm Hg. The heats of combustion may be determined using ASTM D2382–76 or 88 or D4809–95 if published values are not available or cannot be calculated.

<u>n=Number of sample components.</u>

- e. Steam-assisted and nonassisted flares shall be designed for and operated with an exit velocity less than 18.3 m/sec (60 ft/sec), except as provided by 5.1.8.f and 5.1.8.g of this section. The actual exit velocity of a flare shall be determined by dividing by the volumetric flow rate of gas being combusted (in units of emission standard temperature and pressure), by the unobstructed (free) cross-sectional area of the flare tip, which may be determined by Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60, as appropriate, but is not required to be determined using these Methods (unless designated by the Director).
- <u>f.</u> Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in 5.1.8.e. of this section, equal to or greater than 18.3 m/sec (60 ft/sec) but less than 122 m/sec (400 ft/sec), are allowed if the net heating value of the gas being combusted is greater than 37.3 MJ/scm (1,000 Btu/scf).
- g. Steam-assisted and nonassisted flares designed for and operated with an exit velocity, as determined by the method specified in 5.1.8.e. of this section, less than the velocity V_{max}, as determined by the calculation specified in this paragraph, but less than 122 m/sec (400 ft/sec) are allowed. The maximum permitted velocity, V_{max}, for flares complying with this paragraph shall be determined by the following equation:

 $Log_{10}(V_{max}) = (H_T + 28.8)/31.7$

Where:

V_{max}=Maximum permitted velocity, m/sec.

28.8=Constant.

31.7=Constant.

<u>H</u>_T=The net heating value as determined in 5.1.8.d of this section

<u>h.</u> Air-assisted flares shall be designed and operated with an exit velocity less than the velocity V_{max} . The maximum permitted velocity, V_{max} , for air-assisted flares shall be determined by the following equation:

 $V_{\text{max}} = 8.71 + 0.708(H_{\text{T}})$

Where:

V_{max}=Maximum permitted velocity, m/sec.

8.71=Constant.

0.708=Constant.

H_T=The net heating value as determined in 5.1.8.d of this section.

[45CSR13, R13-2837, 4.1.4.]

5.1.9. <u>Reserved.</u> Operation and Maintenance of Air Pollution Control Equipment. The permittee shall, to the extent practicable, install, maintain, and operate all pollution control equipment listed in Section 1.0 and associated monitoring equipment in a manner consistent with safety and good air pollution control practices

for minimizing emissions, or comply with any more stringent limits set forth in this permit or as set forth by any State rule, Federal regulation, or alternative control plan approved by the Secretary. [45CSR§13-5.11.] [45CSR\$13, R13-2837, 4.1.7.]

- 5.1.10. 40 C.F.R. § 63.764 General standards. (note: the following section numbers match those of 40 C.F.R. § 63.764)
 - (a) Table 2 of the Part 63 Subpart HH specifies the provisions of subpart A (General Provisions) of Part 63 that apply and those that do not apply to owners and operators of affected sources subject to this subpart.
 - (b) All reports required under this subpart shall be sent to the Administrator at the appropriate address listed in §63.13. Reports may be submitted on electronic media.
 - (d) Except as specified in paragraph (e)(1) of this requirement, the owner or operator of an affected source located at an existing or new area source of HAP emissions shall comply with the applicable standards specified in paragraph (d) of this section.
 - (2) Each owner or operator of an area source not located in a UA plus offset and UC boundary (as defined in §63.761) shall comply with paragraphs (d)(2)(i) through (iii) of this requirement.
 - (i) Determine the optimum glycol circulation rate using the following equation:

$$L_{OPT} = 1.15 * 3.0 \frac{\text{gal TEG}}{16 \text{ H}_2\text{O}} * \left(\frac{F * (I - O)}{24 \text{ hr/day}} \right)$$

Where:

L_{OPT}= Optimal circulation rate, gal/hr.

F = Gas flowrate (MMSCF/D).

I = Inlet water content (lb/MMSCF).

O = Outlet water content (lb/MMSCF).

3.0 = The industry accepted rule of thumb for a TEG-to water ratio (gal TEG/lb H₂O).

1.15 = Adjustment factor included for a margin of safety.

(ii) Operate the TEG dehydration unit such that the actual glycol circulation rate does not exceed the optimum glycol circulation rate determined in accordance with paragraph (d)(2)(i) of this section. If the TEG dehydration unit is unable to meet the sales gas specification for moisture content using the glycol circulation rate determined in accordance with paragraph (d)(2)(i), the owner or operator must calculate an alternate circulation rate using GRI–GLYCalcTM, Version 3.0 or higher. The owner or operator must document why the TEG dehydration unit must be operated using the alternate circulation rate and submit this documentation with the initial notification in accordance with §63.775(c)(7).

(iii) Maintain a record of the determination specified in paragraph (d)(2)(ii) in accordance with the requirements in §63.774(f) and submit the Initial Notification in accordance with the requirements in §63.775(c)(7). If operating conditions change and a modification to the optimum glycol circulation rate is required, the owner or operator shall prepare a new determination in accordance with paragraph (d)(2)(i) or (ii) of this section and submit the information specified under §63.775(c)(7)(ii) through (v).

(e) Exemptions.

- (1) The owner or operator is exempt from the requirements of paragraph (c)(1) and (d) of this section if the criteria listed in paragraph (e)(1)(i) or (ii) of this section are met, except that the records of the determination of these criteria must be maintained as required in 40 C.F.R. §63.774(d)(1).
 - (ii) The actual average emissions of benzene from the glycol dehydration unit process vent to the atmosphere are less than 0.90 megagram per year, as determined by the procedures specified in 40 C.F.R. §63.772(b)(2) of this subpart.

[40 C.F.R. § 63.764(a), (b), (d), (e)] [F2, DEHY02]

- 5.1.11. For the purposes of determining potential HAP emissions at transmission and storage facilities to comply with the requirements in Condition 5.1.6, the methods specified in 40 C.F.R. 63, Subpart HHH shall be used. For purposes of determining potential HAP emissions at production-related facilities, the methods specified in 40 C.F.R. 63, Subpart HH (i.e. excluding compressor engines from HAP PTE) shall be used. [45CSR13, R13-2837, 4.1.3]
- 5.1.12. The owner or operator of an affected area source that is not located in an Urban-1 county, as defined in §63.761, the construction or reconstruction of which commences on or after July 8, 2005, shall achieve compliance with the provisions of this subpart immediately upon initial startup or January 3, 2007, whichever date is later.

 [40CFR§63.760(f)(6)] [F2, DEHY02]
- 5.1.13. If the annual emissions of benzene from the dehydration unit ever equals or exceeds 0.90 megagram per year (1 tpy) as calculated per \$63.772(b)(2) (requirement 5.3.6), the permittee shall comply with section d(2)(i)through (iii) of \$63.764 (requirement 5.1.10)

 [45CSR\$30-5.1.c] [F2, DEHY02]
- 5.1.14. The applicant is not required to conduct a flare compliance assessment for concentration of sample (i.e. Method 18) and tip velocity (i.e. Method 2) until such time as the Director requests a flare compliance assessment to be conducted in accordance with Sections 5.3.2, but the applicant is required to conduct a flare design evaluation in accordance with Section 5.4.6. Alternatively, the applicant may elect to demonstrate compliance with the flare design criteria requirements of Section 5.1.8 by complying with the compliance assessment testing requirements of Section 5.3.2.

 [45CSR13, R13-2837, 4.1.5]
- 5.1.15. The permittee has defined the facility as a minor source of HAPs for MACT applicability purposes. As a result, the subject facility shall conduct monitoring, testing, and reporting as specified below in order to provide adequate justification for maintaining minor source status. This requirement shall in no way restrict the permittee from conducting more frequent testing to quantify emissions increases.

[40CFR§63.10(b)(3); 45CSR34][F2, DEHY02]

5.2. Monitoring Requirements

N/A

5.2.1. In order to demonstrate compliance with the requirements of Section 5.1.8.c, the applicant shall monitor the presence or absence of a flare pilot flame using a thermocouple or any other equivalent device, except during SSM events.

[45CSR13, R13-2837, 4.2.1, 40 C.F.R.§ 64.3 (a)]

5.2.2. The applicant shall monitor the throughput of wet natural gas fed to the dehydration system on a monthly basis for each glycol dehydration unit listed in the issued General Permit Registration.

[45CSR13, R13-2837, 4.2.2]

5.2.3. In order to demonstrate compliance with the area source status, claimed within 5.1.6, 5.1.11, 5.1.15, as well as the 1 ton per year benzene exemption provided under 5.1.10(e)(1)(ii) using GRI-GLYCalc V3 or higher, the dehydration system must be accurately defined by monitoring and recording actual operating parameters associated with the dehydration system. These parameters shall be measured periodically, with the exception of wet gas composition, in order to define annual average values or, if monitoring is not practical, some parameters may be assigned default values as listed below. Periodically, shall be interpreted as sufficient enough to reflect annual variation and, therefore, this term is operating parameter and site dependent.

The WV Division of Air Quality requires the following actual operating parameters be measured or assumed to equal the default values listed below in order to satisfy this monitoring requirement when using the Gas Analysis and Process Data, GLYCalc emission modeling method:

- Natural Gas Flowrate:
 - o number of days operated per year,
 - o <u>annual daily average (MMscf/day), and</u>
 - o maximum design capacity (MMscf/day)
- Absorber temperature and pressure
- Lean glycol circulation rate
- Glycol pump type
- Flash tank temperature and pressure, if applicable
- Stripping Gas flow rate, if applicable
- Wet gas composition (upstream of the absorber dehydration column) Sampled in accordance with GPA method 2166 and analyzed consistent with GPA extended method 2286 as well as the procedures presented in the GRI-GLYCalc Technical Reference User Manual and Handbook V4.

The following operating parameter(s) may be assigned default values when using GRI-GLYCalc:

- Dry Gas water content at a point directly after exiting the dehydration column and before any additional separation points or assume pipeline quality at 7 lb H₂O / MMscf.
- Lean glycol water content if not directly measured may use the default value of 1.5 % water as established by GRI.
- <u>Lean glycol circulation rate may be estimated using the recirculation ratio of 3 gal TEG / lb H₂O removed.</u>

[45CSR§30-5.1.c][F2, DEHY02]

- 5.2.4. Commencement of operation. The permittee shall conduct the monitoring required under 40 CFR Part 64 upon issuance of this permit that includes such monitoring, or by the initial start-up date of the flare F2 that requires such monitoring, whichever is later.
 [40 CFR §§ 64.7(a) and 64.6(d); 45CSR§30-5.1.c.]
- 5.2.5. Proper Maintenance At all times, the permittee shall maintain the monitoring, including but not limited to, maintaining necessary parts for routine repairs of the monitoring equipment.

 [40 CFR § 64.7(b); 45CSR§30-5.1.c.]
- 5.2.6. Continued Operation Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), the permittee shall conduct all monitoring in continuous operation at all times that the pollutant-specific emissions unit is operating. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of 40 CFR Part 64, including data averages and calculations, or fulfilling a minimum data availability requirement, if applicable. The owner or operator shall use all the data collected during all other periods in assessing the operation of the control device and associated control system. A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not malfunctions.

 [40 CFR § 64.7(c); 45CSR§30-5.1.c.]
- 5.2.7. **Documentation of Need for Improved Monitoring** After approval of monitoring under 40 CFR Part 64, if the permittee identifies a failure to achieve compliance with an emission limitation or standard for which the approved monitoring did not provide an indication of an excursion or exceedance while providing valid data, or the results of compliance or performance testing document a need to modify the existing indicator ranges or designated conditions, the permittee shall promptly notify the Director and, if necessary, submit a proposed modification to the permit to address the necessary monitoring changes. Such a modification may include, but is not limited to, reestablishing indicator ranges or designated conditions, modifying the frequency of conducting monitoring and collecting data, or the monitoring of additional parameters.

 [40 CFR § 64.7(e); 45CSR§30-5.1.c.]
- 5.2.8. Quality Improvement Plan (QIP) Based on the results of a determination made under 40 CFR §64.7(d)(2) (permit condition 5.4.14.b), the Administrator or the Director may require the permittee to develop and implement a QIP. If a QIP is required, then it shall be developed, implemented, and modified as required according to 40 CFR §§ 64.8(b) through (e). Refer to permit condition 5.5.5.b.3. for the reporting required when a QIP is implemented.

 [40 CFR § 64.8; 45CSR§30-5.1.c.]
- 5.2.9. Excursions The dehydration unit is designed to "shutdown" if the absence of a flame is detected.

 Therefore an excursion will occur if the dehydration unit is not shutdown when the absence of a flame is detected.

 [40 CFR § 64.6(c)(2); 45CSR§30-5.1.c.]

5.3. Testing Requirements

5.3.1. In order to demonstrate compliance with the flare opacity requirements of 5.1.2 5.1.8.b the permittee shall conduct a Method 22 opacity test for at least two hours. This test shall demonstrate no visible emissions are observed for more than a total of 5 minutes during any 2 consecutive hour period using 40CFR60 Appendix A Method 22. The permittee shall conduct this test within 180 days one (1) year of permit issuance or initial startup whichever is later. The visible emission checks shall determine the presence or absence of visible emissions. At a minimum, the observer must be trained and knowledgeable regarding the effects of background contrast, ambient lighting, observer position relative to lighting, wind, and the presence of uncombined water (condensing water vapor) on the visibility of emissions. This training may

be obtained from written materials found in the References 1 and 2 from 40 CFR Part 60, appendix A, Method 22 or from the lecture portion of 40 CFR part 60, appendix A, Method 9 certification course. [45CSR13, R13-2837, 4.2.1, 4.3.1]

After the above testing, visual emission checks of flare specified shall be conducted monthly. If during these checks or at any other time visible emissions are observed at any emission point, compliance with 5.1.2 and 5.1.8.b shall be determined by conducting tests in accordance with Method 9 of 40 C.F.R. 60, Appendix A. Records shall be maintained on site stating the date and time of each visible emission check, whether visible emissions were observed, the opacity observed, and the corrective measures taken. Visible emission checks shall not be required during start-ups, shut-downs and malfunctions. [45CSR§30-5.1.c]

- 5.3.2. Upon the Directors request, tThe Director may require the permittee to conduct a flare compliance assessment to demonstrate compliance with section 5.1.8. This compliance assessment testing shall be conducted in accordance with Test Method 18 for organics and Test Method 2, 2A, 2C, or 2D in appendix A to 40 CFR part 60, as appropriate, or other equivalent testing approved in writing by the Director. Also, Test Method 18 may require the permittee to conduct Test Method 4 in conjunction with Test Method 18. [45CSR13, R13-2837, 4.2.2. 4.3.2.]
- 5.3.3. In order to demonstrate compliance with 5.1.6 5.1.11, upon request of the Director, the permittee shall demonstrate compliance with the HAP emissions limits using GLYCalc Version 3.0 or higher. The permittee shall sample in accordance with GPA Method 2166 and analyze the samples utilizing the extended GPA Method 2286 as specified in the GRI-GLYCalc V4 Technical Reference User Manual and Handbook.

[45CSR13, R13-2837, 4.2.3. 4.3.3.]

- 5.3.4. The following testing and compliance provisions of Part 63 Subpart HH National Emission Standards for Hazardous Air Pollutants From Oil and Natural Gas Production Facilities are applicable to the facility:
 40 C.F.R. § 63.772 Test methods, compliance procedures, and compliance demonstrations.(note: the following section numbers match those of 40 C.F.R. § 63.772)
 - (b) Determination of glycol dehydration unit flowrate or benzene emissions. The procedures of this paragraph shall be used by an owner or operator to determine glycol dehydration unit natural gas flowrate or benzene emissions to meet the criteria for an exemption from control requirements under §63.764(e)(1) (requirement 5.1.10).
 - (2) The determination of actual average benzene emissions from a glycol dehydration unit shall be made using the procedures of either paragraph (b)(2)(i) or (b)(2)(ii) of this section. Emissions shall be determined either uncontrolled, or with federally enforceable controls in place.
 - (i) The owner or operator shall determine actual average benzene emissions using the model GRI-GLYCalc TM, Version 3.0 or higher, and the procedures presented in the associated GRI-GLYCalc TM. Technical Reference Manual. Inputs to the model shall be representative of actual operating conditions of the glycol dehydration unit and may be determined using the procedures documented in the Gas Research Institute (GRI) report entitled "Atmospheric Rich/Lean Method for Determining Glycol Dehydrator Emissions" (GRI 95/0368.1); or
 - (ii) The owner or operator shall determine an average mass rate of benzene emissions in kilograms per hour through direct measurement using the methods in §63.772(a)(1)(i) or

(ii), or an alternative method according to §63.7(f). Annual emissions in kilograms per year shall be determined by multiplying the mass rate by the number of hours the unit is operated per year. This result shall be converted to megagrams per year.

Compliance with this monitoring and testing requirement shall be streamlined by demonstrating compliance with the monitoring specified within 5.2.3 and the testing provision of 5.3.5.

[40 C.F.R. § 63.772(b)(2)(i)[DEHY02, F2]]

5.3.5. Within the 3rd year of this permit term, the permittee shall determine the composition of the wet natural gas by sampling in accordance with GPA Method 2166 and analyzing according to extended GPA Method 2286 analysis as specified in the GRI-GLYCalc V4 Technical Reference User Manual and Handbook. As specified in the handbook, the permittee shall sample the wet gas stream at a location prior to the glycol dehydration contactor column, but after any type of separation device, in accordance with GPA method 2166. The permittee may utilize other equivalent methods provided they are approved in advance by DAQ as part of a testing protocol. If alternative methods are proposed, a test protocol shall be submitted for approval no later than 60 days before the scheduled test date.

[45CSR§30-5.1.c][F2, DEHY02]

5.4. Recordkeeping Requirements

5.4.1. For the purpose of demonstrating compliance with 5.1.2 and 5.1.8.b, the permittee shall maintain records of all monitoring data documenting the date and time of each visible emission check, the emission point or equipment/source identification number, the name or means of identification of the observer, and the results of the check(s). The permittee shall also record the general weather conditions (i.e. sunny, approximately 80°F, 6-10 mph NE wind) during the visual emission check(s). Should a visible emission observation be required to be performed per the requirements specified in Method 9, the data records of each observation shall be maintained per the requirements of Method 9. For an emission unit out of service during the normal monthly evaluation, the record of observation may note "out of service" (O/S) or equivalent.

[45CSR§30-5.1.c]

- 5.4.2. Reserved. Record of Maintenance of Air Pollution Control Equipment. For all pollution control equipment listed in Section 1.0, the permittee shall maintain accurate records of all required pollution control equipment inspection and/or preventative maintenance procedures.

 [45CSR13, R13-2837, 4.3.2.]
- 5.4.3. Reserved. Record of Malfunctions of Air Pollution Control Equipment. For all air pollution control equipment listed in Section 1.0, the permittee shall maintain records of the occurrence and duration of any malfunction or operational shutdown of the air pollution control equipment during which excess emissions occur. For each such case, the following information shall be recorded:
 - a. The equipment involved.
 - b. Steps taken to minimize emissions during the event.
 - c. The duration of the event.
 - d. The estimated increase in emissions during the event.

For each such case associated with an equipment malfunction, the additional information shall also be recorded:

- e. The cause of the malfunction.
- f. Steps taken to correct the malfunction.
- Any changes or modifications to equipment or procedures that would help prevent future recurrences of the malfunction.

[45CSR13, R13-2837, 4.3.3.]

5.4.4. For the purpose of demonstrating compliance with 5.1.8.c and 5.2.1, the permittee shall monitor the presence or absence of a flare pilot flame using a thermocouple or any other equivalent device. The permittee shall maintain records of the times and duration of all periods in which the pilot flame was absent

[45CSR13, R13-2837, 4.3.4. 4.4.1.]

5.4.5. The permittee shall monitor and record the throughput of wet natural gas fed to the dehydration system on a monthly basis.

[45CSR13, R13-2837, 4.3.5. 4.4.7.; 45CSR§30-5.1.c]

5.4.6. For the purpose of demonstrating compliance with sections 5.1.7, 5.1.8 and 5.3.2, the permittee shall maintain a record of the flare design evaluation. The flare design evaluation shall include, net heat value calculations, exit (tip) velocity calculations, and all supporting concentration calculations and any other related information requested by the Director.

[45CSR13, R13-2837, 4.3.6. 4.4.2.]

5.4.7. For the purpose of demonstrating compliance with the requirements set forth in sections 5.1.8 and 5.3.3.,

Tthe permittee shall maintain records of any testing required by the Director under section conducted in accordance with 5.3.3 of this permit.

[45CSR13, R13-2837, 4.3.7. 4.4.3.]

- 5.4.8. For the purposes of demonstrating compliance with section 5.1.8.b of this permit, the permittee shall maintain records of the visible emissions opacity tests conducted under per section 5.3.1 of this permit. [45CSR13, R13-2837, 4.3.8. 4.4.5.]
- 5.4.9. 40 C.F.R. § 63.774 Recordkeeping requirements.
 - (d)(1) An owner or operator of a glycol dehydration unit that meets the exemption criteria in §63.764(e)(1)(i) or §63.764(e)(1)(ii) shall maintain the records specified in paragraph (d)(1)(i) or paragraph (d)(1)(ii) of this section, as appropriate, for that glycol dehydration unit.
 - (ii) The actual average benzene emissions (in terms of benzene emissions per year) as determined in accordance with §63.772(b)(2).

[40 C.F.R. § 63.774]

5.4.10. The permittee shall document and maintain the corresponding records specified by the on-going monitoring requirements of 5.2 and testing requirements of 5.3. [45CSR13, R13-2837, 4.4.4]

- 5.4.11. For the purpose of demonstrating compliance with section 5.1.11, the permittee shall maintain a record of all potential to emit (PTE) HAP calculations for the entire affected facility. These records shall include the natural gas compressor engines and ancillary equipment. [45CSR13, R13-2837, 4.4.6]
- 5.4.12. All records required under Section 5.4. shall be maintained on site or in a readily accessible off-site location maintained by the applicant for a period of five (5) years. Said records shall be readily available to the Director of the Division of Air Quality or his/her duly authorized representative for expeditious inspection and review. Any records submitted to the agency pursuant to a requirement of this permit or upon request by the Director shall be certified by a responsible official. [45CSR13, R13-2837, 4.4.8]
- 5.4.13. For the purpose of documenting compliance with the emission limitations, HAP major source thresholds, as well as the 1 ton per year benzene exemption, the permittee shall maintain records of all monitoring data, wet gas sampling, and annual GLYCalc emission estimates.

 [45CSR§30-5.1.c] [DEHY02, F2]

5.4.14. Response to Excursions or Exceedances

a. Upon detecting an excursion or exceedance, the permittee shall restore operation of the pollutant-specific emissions unit (including the control device and associated capture system) to its normal or usual manner of operation as expeditiously as practicable in accordance with good air pollution control practices for minimizing emissions. The response shall include minimizing the period of any startup, shutdown or malfunction and taking any necessary corrective actions to restore normal operation and prevent the likely recurrence of the cause of an excursion or exceedance (other than those caused by excused startup or shutdown conditions). Such actions may include initial inspection and evaluation, recording that operations returned to normal without operator action (such as through response by a computerized distribution control system), or any necessary follow-up actions to return operation to within the indicator range, designated condition, or below the applicable emission limitation or standard, as applicable.

b. Determination of whether the permittee has used acceptable procedures in response to an excursion or exceedance will be based on information available, which may include but is not limited to, monitoring results, review of operation and maintenance procedures and records, and inspection of the control device, associated capture system, and the process.

[40 CFR § 64.7(d); 45CSR§30-5.1.c.]

5.4.15. General recordkeeping requirements for 40 CFR Part 64 (CAM)

The permittee shall comply with the recordkeeping requirements specified in permit conditions 3.4.1. and 3.4.2. The permittee shall maintain records of monitoring data, monitor performance data, corrective actions taken, any written quality improvement plan required pursuant to 40 CFR §64.8 (5.2.8) and any activities undertaken to implement a quality improvement plan, and other supporting information required to be maintained under 40 CFR Part 64 (such as data used to document the adequacy of monitoring, or records of monitoring maintenance or corrective actions).

[40 CFR § 64.9(b); 45CSR§30-5.1.c.]

5.5. Reporting Requirements

5.5.1. Any violation(s)/deviation(s) of from the allowable visible emission requirement for any emission source discovered during observations using 40CFR Part 60, Appendix A, Method 9 or 22 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days, of the occurrence and shall include, at least the following information: the results of the visible determination of opacity of emissions, the cause or suspected cause of the violation(s)/deviation(s), and any corrective measures taken or planned.

[45CSR§30-5.1.c, 45CSR13, R13-2837, 4.4.2. 4.5.2]

- 5.5.2. If permittee is required by the Director to demonstrate compliance with section 5.3.3, then the permittee shall submit a testing protocol at least thirty (30) days prior to testing and shall submit a notification of the testing date at least fifteen (15) days prior to testing. The permittee shall submit the testing results within sixty (60) days of testing and provide all supporting calculations and testing data.

 [45CSR13, R13-2837, 4.4.1, 4.5.1.]
- 5.5.3. Any deviation(s) from the flare design and operation criteria in Section 5.1.8 shall be reported in writing to the Director of the Division of Air Quality as soon as practicable, but in any case within ten (10) calendar days of discovery of such deviation.[45CSR13, R13-2837, 4.4.3. 4.5.3.]
- 5.5.4. The permittee shall submit by March 31st of the following year, an emission summary for the dehydration unit (DEHY02), which incorporates the wet gas testing results required by 5.3.5. The permittee shall also supply a copy of the most recent report within the facility's subsequent Title V renewal application. These reports shall include an actual annual average emission estimate for the calendar year of the sample, modeled using GLYCalc V3 or higher software, which incorporates site specific parameters measured in accordance with 5.2.3. The permittee shall also supply all supporting documentation where site specific operating parameters are tabulated to define the annual average values. The report shall incorporate a copy of the lab analysis obtained from the wet gas testing as well as a description of how and where the sample was taken. The report shall include a reference to all sampling and analytical methods utilized. Additionally, the permittee shall identify where the compressor station is located with respect to a custody transfer point, which is referenced within 40 C.F.R 63, subpart HH as the point where the gas enters into a natural gas transmission and/or storage pipeline. This report shall be signed by a responsible official upon submittal.

[45CSR§30-5.1, DEHY02]

5.5.5. General reporting requirements for 40 C.F.R. Part 64 (CAM)

- a. On and after the date specified in 40 CFR §64.7(a) by which the permittee must use monitoring that meets the requirements of 40 CFR 64, the permittee shall submit CAM monitoring reports with the semi-annual monitoring report under permit condition 3.5.6. Incorporation by reference within the semi-annual monitoring report is not acceptable.
- b. A report for monitoring under 40 CFR 64 shall include, at a minimum, the information required under permit condition 3.5.8. and the following information, as applicable:
 - 1.Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
 - 2.Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
 - 3. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR §64.8. Upon completion of a QIP, the permittee shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

[40 CFR § 64.9(a); 45CSR§30-5.1.c.]

5.6. Compliance Plan

N/A